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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,795	06/08/2005	Evan Nielsen	66386-356-7	3035

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EXAMINER	
LE, TOAN M	

ART UNIT	PAPER NUMBER
2863	

MAIL DATE	DELIVERY MODE
10/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,795	NIELSEN, EVAN	
	Examiner	Art Unit	
	Toan M. Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-9,21 and 22* is/are rejected.

7)☒ Claim(s) *10-20 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/19/05;2/25/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 8 recites the limitation "the surface element" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-9, and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rasmussen et al. (US Patent No. 5,850,619).

Referring to claim 1, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein air temperature is measured (col. 5, lines 29-35) and a type of precipitation and an amount of precipitation are estimated (col. 5, lines 36-67 to col. 6, lines 1-6), wherein a measurement is performed for determining the actual amount of ice contained in the precipitation, and the results from said measurements are combined for determining the risk of ice deposition (col. 3, lines 65-67 to col. 4, lines 1-34; col. 7, lines 14-22; col. 8, lines 26-44).

As to claim 2, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, characterized in that the type of precipitation is estimated on the

basis of a measurement for determining the ratio of liquid to frozen particles contained in the precipitation (col. 5, lines 36-54).

Referring to claim 4, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein a measurement is performed for determining the total equivalent, liquid amount of precipitation (col. 6, lines 52-60; col. 8, lines 26-44).

As to claim 5, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein the measurement for determining the actual amount of ice contained in the precipitation is performed as a calculation on the basis of dew point measurement (col. 1, lines 14-25; col. 5, lines 36-67 to col. 6, lines 1-6).

Referring to claim 6, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein the measurement for determining the actual amount of ice contained in the precipitation is performed as a measurement of actual ice formation (col. 4, lines 10-24).

As to claim 7, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein the measurement comprises provision of a surface element that has a predetermined surface area and is, during a predetermined period of time, caused to move relative to the atmospheric air, following which the amount of ice accumulated on the surface element during said period of time is measured (col. 5, lines 36-67 to col. 6, lines 1-6).

Referring to claim 8, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein the temperature of the surface element is caused to correspond essentially to the temperature of the atmosphere (col. 5, lines 29-35).

As to claim 9, Rasmussen et al. disclose a method of determining the risk of ice deposition due to precipitation, wherein the temperature of the surface is caused to have another predetermined temperature during said period of time (col. 5, lines 29-35)

Referring to claim 21, Rasmussen et al. disclose an apparatus for determining a risk of ice deposition due to precipitation which comprises a combination of optical means for measuring the reflectivity of precipitation (col. 4, lines 35-40), mechanical means for moving a measuring surface element in relation to the air and for measuring the amount of ice accumulated on the surface element during a given period of time (col. 5, lines 36-67 to col. 6, lines 1-6), and electronic means for combining the measurements (col. 8, lines 9-59).

As to claim 22, Rasmussen et al. disclose an apparatus for determining a risk of ice deposition due to precipitation and for the calculation of holdover time for anti-icing liquid, comprising a data storage device for storing information about empirical values for holdover time as a function of type of precipitation and the concentration of the anti-icing liquid (col. 6, lines 34-60).

Allowable Subject Matter

Claims 10-20 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for allowance of claim 10 is the inclusion of following measurement of the accumulated amount of ice, a relative movement is briefly provided between the surface element and the atmosphere at a rate that considerably exceeds the rate prior to the measurement, following which a further measurement of deposited ice is performed.

The reason for allowance of claims 11-20 is they depend on allowable claim 10.

The reason for allowance of claim 23 is the inclusion of a mathematical model for estimating the ice deposition due to precipitation and comparing the estimated values to the actually measured values for the amount of ice and for adjusting parameters in the model for optimization thereof.

Response to Arguments

Applicant's arguments with respect to claims 1-2 and 4-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

"Ice Detector Evaluation for Aircraft Hazard Warning and Undercooled Water Content Measurements", E. N. Brown, Journal of Aircraft, Vol. 19, No. 11, November 1982, Pages 980-983.

"The Local Analysis and Prediction System (LAPS): Analysis of Clouds, Precipitation, and Temperature", Albers et al., American Meteorological Society, Vol. 11, No. 3, September 1996, Pages 273-287.

"Weather Support to Deicing Decision Making (WSDDM): A Winter Weather Nowcasting System", Rasmussen et al., Bulletin of the American Meteorological Society, Vol. 82, No. 4, April 2001, Pages 579-595.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Toan Le

October 28, 2007

/Michael P. Nghiem/
Primary Examiner, GAU 2863

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October 28, 2007

MICHAEL NGHIEM
PRIMARY EXAMINER 10/28/07

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